Curriculum Vitae

Adam M. Bynum

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EDUCATION

Texas A&M University Corpus Christi, Corpus Christi, TX 2022
M.S Marine Biology
4.00 GPA

University of Dayton, Dayton, OH 2014
B.S. Biology *Magna Cum Laude*
3.78 GPA

RESEARCH EXPERIENCE

Research Assistant 2016-2018
Texas A&M University Corpus Christi (TAMUCC), Corpus Christi, TX
Department of Life Sciences

TEACHING

Instructor of Biology 2022-current
Our Lady of the Lake University, San Antonio, TX
College of Arts and Sciences

Adjunct Professor 2021-2022
Our Lady of the Lake University, San Antonio, TX
College of Arts and Sciences

Adjunct Professor 2021-2022
University of the Incarnate Word, San Antonio, TX
Department of Biology

Teaching Assistant 2015-2018
Texas A&M University Corpus Christi (TAMUCC), Corpus Christi, TX
Department of Life Sciences

Course Name	Class Code	Semester
General Biology II	BIOL1402	Current
General Biology I	BIOL 1401	Current
General Biology II Lab	BIOL 1402L	Current
General Biology I Lab	BIOL 1401L	Current
Ecology	BIOL 2455	Current
Evolution	BIOL 3465	Current
Evolution Lab	BIOL 3465L	Current
General Human Anatomy & Physiology II	BIOL 1422	Spring 2023
Invertebrate Zoology	BIOL 4480	Summer 2023
Invertebrate Zoology	BIOL 4480L	Summer 2023
Molecular & Cell Biology	BIOL 2430	Fall 2023
Molecular & Cell Biology Lab	BIOL 2430L	Fall 2023

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PRESENTATIONS

3 Minute Thesis Competition, Corpus Christi, TX 2017
Modeling Genetic Diversity in Non-Equilibrium Populations
Marine Graduate Student Organization Student Symposium, Corpus Christi, TX 2016
Modeling Genetic Diversity in Non-Equilibrium Populations
COS Research Conference, San Antonio, TX 2016
Modeling Genetic Diversity in Non-Equilibrium Populations
Texas A&M Systems Marine Biology Retreat, Corpus Christi, TX 2016
Modeling Genetic Diversity in Non-Equilibrium Populations

THESIS

Behavior of Popular Indices of Genetic Diversity in Simulated Expanding Populations

We report the effects of mutation rate (μ), initial population size (N_{e0}), and final population size (N_{e1}) on the accumulation of genetic diversity in expanding populations using a Wright-Fisher forward time model built with SLiM2. Using a 300 bp sequence to simulate modern genome-wide surveys of genetic variation (RAD), a range of naturally occurring mutation rates, and population sizes, multiple models were created to cover a broad portion of parameter space, and six commonly reported measures of genetic diversity were analyzed.

RESEARCH EXPERIENCE

Population Genetic Modeling Corpus Christi, TX 2015-2021
examining how genetic diversity behaves in non-equilibrium conditions. Forward time and coalescent genetic simulations were created, run, and analyzed on the local high-performance cluster (HPC).

Research Project Development Dayton, OH 2013
Assisted in starting and developing a research project concerning the local aquatic life and the impact of removing low dams found within the local watershed. Scouted research sites, created a first draft of a research proposal, and contacted several community leaders to provide support and insight.

Macroinvertebrate Sampling of Local Watershed Dayton, OH 2013
Created a aquatic macroinvertebrate key for the Rivers Institute to use during summer programs. Taught colleagues how to use the key and how to teach sampling to K through 12 students. Led multiple sampling and identification programs.

Forensic Applications of Decomposition Biology Dayton, OH 2011
Identified various species of blow flies that were collected at field sites where decaying pigs were placed. Input results into a database for later analysis.

South Texas Amphibian and Reptile Society (STAR) Member 2015-present